

A process for improving the performance of a multiprocessor system comprising a job queue and a system architecture for implementation of the process.

The invention is concerned with a process for the allocation of tasks in a multiprocessor system for processing numerical data with a preemptive operating system and an architecture for implementation of this process. The system comprising processors (200-203 and 210-213) capable of processing tasks in parallel, distributed in groups (200-201, 202-203). An elementary queue (5_a, 5_b) is associated with each of the groups of processors (200-201, 202-203) and records tasks to be performed. All the tasks to be performed (T₁ to T₁₀) are recorded in a table (4). Each of the tasks (T₁ to T₁₀) in the table (4) is associated with one of the queues (5_a, 5_b), and each of the tasks recorded in the queues (5_a, 5_b) is associated with one of the processors (200 to 201). The associations are made by sets of crossed pointers (*p*₂₀₀ to *p*₂₀₃, *pp*_{5_a}, *pp*_{5_b}, *pT*₁, *pT*₅, *pT*₁₀, *p*_{5_a1}, to *p*_{5_a4}, *p*_{5_b1} to *p*_{5_b10}). In a further embodiment, in accordance with a number of variants, a (re)-balancing of the load of the system is carried out between elementary queues.